

Notice of Allowability

Application No.

10/690,871

Examiner

Bea Koempel-Thomas

Applicant(s)

LIU, WEI-HONG

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 8 March 2007.
2. ☒ The allowed claim(s) is/are 1-27.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. Claims 1-27 are pending in this application and presented for examination.
2. Claims 1, 10, 16, and 19 are presently amended.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Response to Amendment

4. The amended abstract filed 8 March 2007, is accepted. The objection to the abstract is withdrawn.
5. The objection to claim 16 due to lack of antecedent basis is withdrawn.
6. Applicant's arguments, see page 10, paragraphs 5 and 6; and page 11, paragraph 1, filed 8 March 2007, with respect to dynamically generating a kernel-mode interface driver in claims 1, 10 and 19, have been fully considered and are persuasive. The rejections of claims 1, 10 and 19 are withdrawn.
7. The rejections of dependent claims 2, 11 and 20 under 35 U.S.C. 102, are withdrawn as dependent from claims 1, 10 and 19.
8. The rejections of claims 3-9, 12-18, and 21-27 under 35 U.S.C. 103, are withdrawn as dependent from claims 1, 10 and 19.

Allowable Subject Matter

9. Claims 1-27 are allowed.
10. The following is an examiner's statement of reasons for allowance:

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Claims 1-9, 10-18, and 19-27 are drawn to a system, method, and a computer readable medium functionally interrelated to a computer executing the method, respectively, for performing kernel-mode operations.

The closest prior arts are Warwick et al., U.S. Patent No. 6,598,169 (hereinafter “Warwick”), which discloses a similar system. And, Gao et al., “Embedded microprocessor protection mode of high-privilege system call,” Chinese Journal of Computers, 2000, v. 23 n. 3, pp. 318-323 (hereinafter “Gao”), which also discloses a similar system. Warwick discloses a system for performing kernel-mode operations (col. 2 lines 30-31) comprising: a kernel-mode interface generator (Figure 2 and col. 5 lines 31-34, and 41-47, WMI providers UM and KM) for generating a kernel-mode interface driver (col. 5 line 51), which in turn generates a call gate (col. 5 line 49), to perform a kernel-mode operation with kernel-mode authorization (col. 5 line 47, allow pipeline) in a kernel mode; and an authorization interface (Figure 2 and col. 5 line 43, WDM provider UM), coupled to the kernel-mode interface generator (Figure 2 and col. 5 line 45, WDM provider KM), to connect a user mode to kernel mode (col. 5 lines 49-50, pipeline between UM and KM), switching a process (col. 5 lines 55-56, allow management applications to query or set management information), from user mode to kernel mode via the call gate (col. 5 line 49, pipeline), to perform the kernel-mode operation (col. 5 line 58, WMI method call). However, Warwick neither teaches nor suggests the kernel-mode interface generator **dynamically** generating a kernel-mode interface driver.

Gao discloses additional details of such a system. However, Gao also neither teaches nor suggests the kernel-mode interface generator **dynamically** generating a kernel-mode interface driver.

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Dynamic device driver generation has been aspirationally suggested by Katayama et al., "A Method for Automatic Generation of Device Drivers with a Formal Specification Language," Operating Systems Review, 1995, v. 29 n. 3, pp. 91-96 (hereinafter "Katayama"). Katayama suggests a device driver generation system. However, the system suggested by Katayama is functionally different from the claimed dynamic generation of a kernel-mode interface driver, and Katayama explicitly states that the system suggested therein "cannot generate a complete device driver," (Katayama, p. 185, paragraph 4).

Therefore, this particular limitation explicitly incorporated in independent claims 1, 10 and 19 renders claims 1-27 allowable.


Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

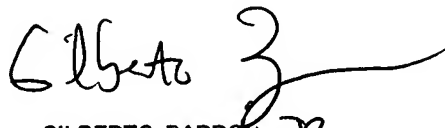

Please direct any inquiry concerning this communication or earlier communications from the examiner to Bea Koempel-Thomas whose telephone number is 571-270-1252. The examiner can normally be reached on Monday - Thursday & alternate Fridays; 0730 - 1700.

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If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, Gilberto Barron, at 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bea Koempel-Thomas, Esq.
Patent Examiner
AU 2132 

3/23/2007


GILBERTO BARRON 
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100